

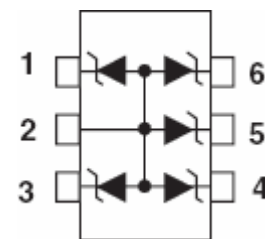
## LESDA6V1W6T1G *Transil array for data protection*

<p><b>General Description</b></p> <p>The LESDA6V1W6T1G is a monolithic suppressor designed to protect components connected to data and transmission lines against ESD. The device clamp the voltage just above the logic level supply for positive transients, and to a diode drop below ground for negative transients.</p> <p><b>Applications</b></p> <ul style="list-style-type: none"> <li>● Computers</li> <li>● Printers</li> <li>● Communication systems</li> <li>● Cellular phones handsets and accessories</li> <li>● Wireline and wireless telephone sets</li> <li>● Set top boxes</li> </ul>	<p><b>Features</b></p> <ul style="list-style-type: none"> <li>● 4 Unidirectional Transil functions</li> <li>● Breakdown voltage:</li> <li>● VBR = 6.1 V min. and 25 V min.</li> <li>● Low leakage current: &lt; 1 mA</li> <li>● Very small PCB area &lt; 4.2 mm<sup>2</sup> typically</li> <li>● High ESD protection level: up to 25 kV</li> <li>● High integration</li> </ul> <p><b>Complies with the following standards</b></p> <p><b>IEC61000-4-2</b></p> <p>Level 4 15 kV (air discharge) 9 kV(contact discharge)</p> <p><b>MIL STD 883E - Method 3015-7 Class 3</b></p> <p>25 kV HBM (Human Body Model)</p>
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**SOT-363**

### Functional diagram



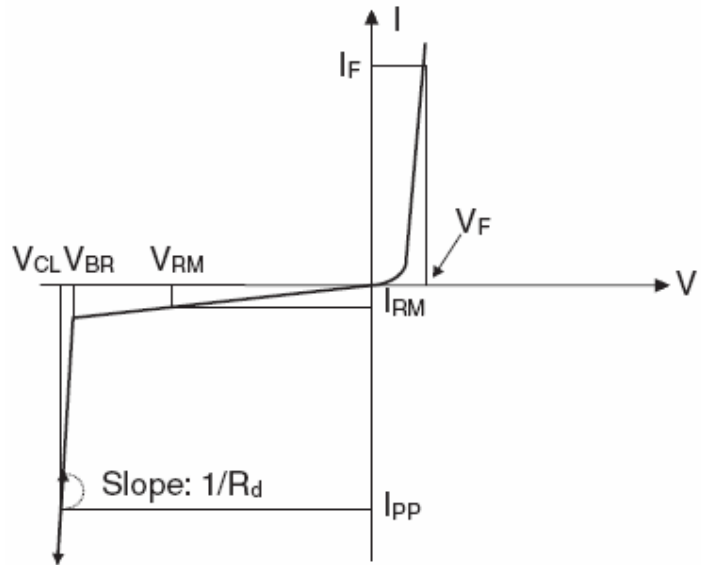
**LESD6V1W6T1G**

### Absolute Ratings (T<sub>amb</sub>=25°C )

Symbol	Parameter	Value	Units
P <sub>PP</sub>	Peak Pulse Power (t <sub>p</sub> = 8/20μs)	100	W
T <sub>L</sub>	Maximum lead temperature for soldering during 10s	260	°C
T <sub>stg</sub>	Storage Temperature Range	-40 to +125	°C
T <sub>op</sub>	Operating Temperature Range	-40 to +125	°C

### Electrical Parameter

Symbol	Parameter
$V_{RM}$	Stand-off voltage
$V_{BR}$	Breakdown voltage
$V_{CL}$	Clamping voltage
$I_{RM}$	Leakage current
$I_{PP}$	Peak pulse current
$I_R$	Reverse current
$I_F$	Forward current
$\alpha T$	Voltage temperature coefficient
$V_F$	Forward voltage drop
C	Capacitance
$R_d$	Dynamic



### Electrical Characteristics

Part Numbers	$V_{BR}$		$I_R$	$V_{RM}$	$I_{RM}$	$V_F$	$I_F$	$R_d$	$\alpha T$	C
	Min.	Max.				Max.		Typ. <sup>(1)</sup>	Max. <sup>(2)</sup>	Typ. 0v bias
	v	v				v		$\Omega$	$10^{-4}/^{\circ}C$	pF
LESDA6V1W6T1G	6.1	7.2	1	3	1	1.25	200	0.61	6	50

1. Square pulse  $I_{PP}=15A, t_p=2.5\mu s$  2.  $V_{BR}=\alpha T * (T_{amb}-25^{\circ}C) * V_{BR}(25^{\circ}C)$

### Typical Characteristics

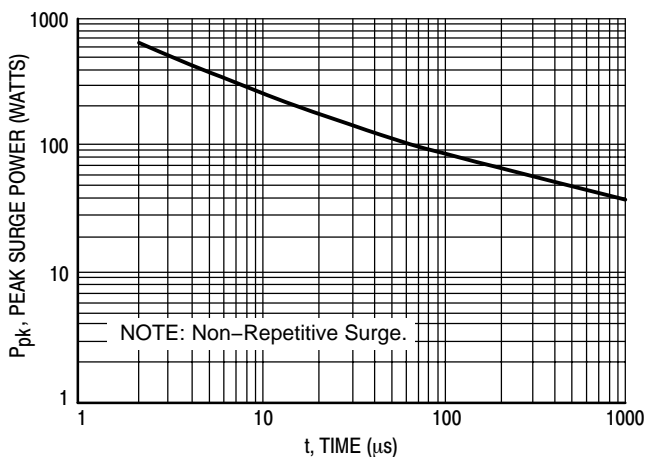


Figure 1. Pulse Width

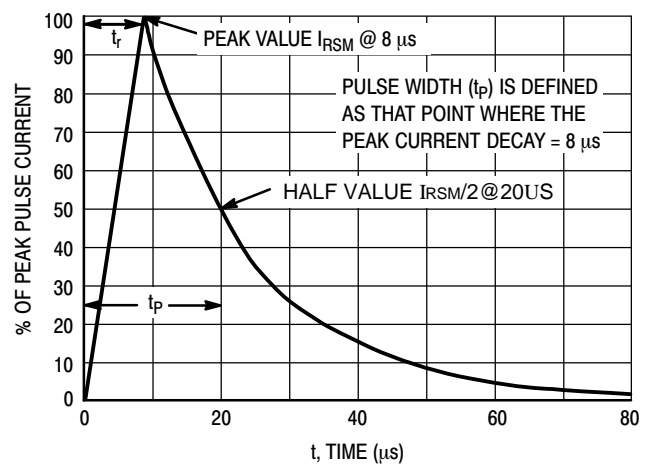
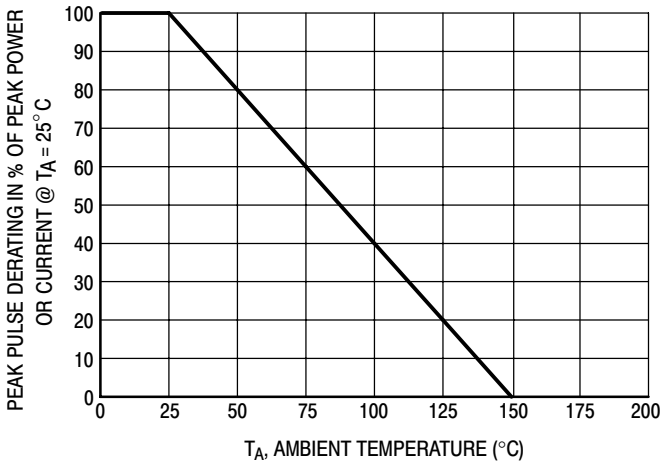
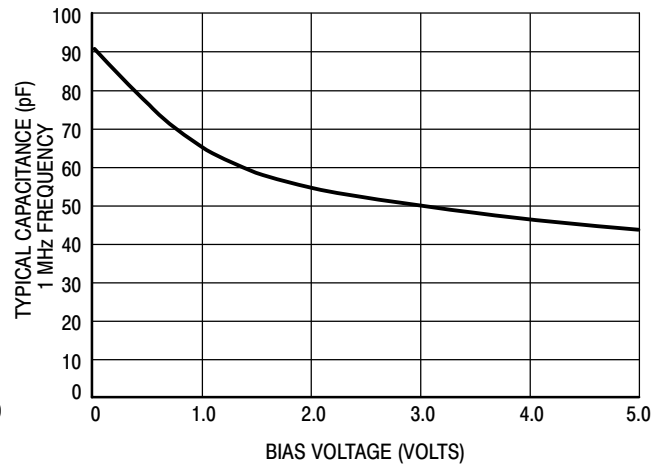
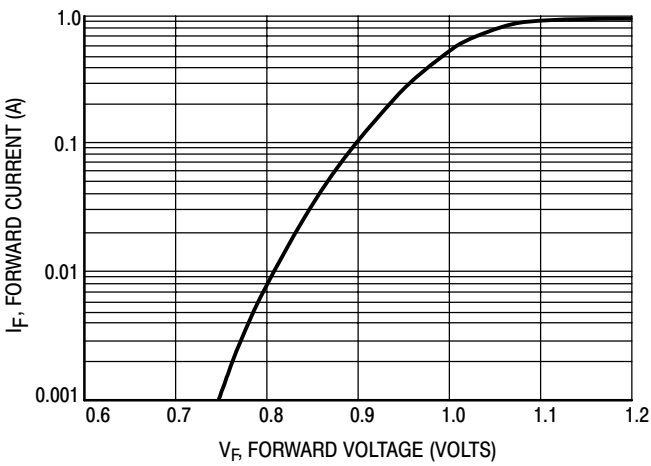
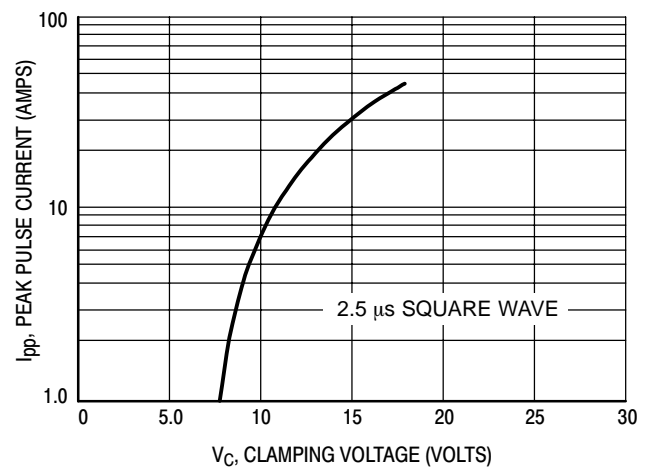
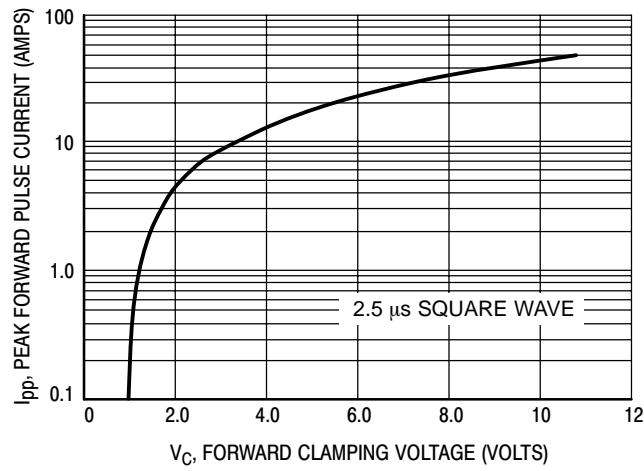


Figure 2. 8 x 20  $\mu s$  Pulse Waveform


**Figure 3. Pulse Derating Curve**

**Figure 4. Capacitance**

**Figure 5. Forward Voltage**

**Figure 6. Clamping Voltage versus Peak Pulse Current (Reverse Direction)**



**Figure 7. Clamping Voltage versus Peak Pulse Current (Forward Direction)**

**Package mechanical data**

**SOT-363 Package**

